CLAIMS

1. A region defined in relation to a surface, coded data being disposed within the region, wherein the coded data is indicative of:

a region identity associated with the region; and

a plurality of points within the region.

2. A region according to claim 1, wherein the coded data includes at least one tag, each tag being indicative of the region identity and the position of the tag within the region.

3. A region according to claim 2, wherein each of the tags includes:

first identity data defining a relative position of that tag; and

second identity data identifying the surface.

4. A region according to claim 3, including further tags that do not include both first identity data and second identity data.

5. A region according to claim 3, wherein the relative position is defined in relation to the surface.

6. A region according to claim 3, wherein the relative position is defined in relation to a plurality of the other tags.

7. A region according to claim 3, wherein the first identity data identifies stored information defining the relative position, the stored information not being stored on the

surface.

8. A region according to claim 3, wherein the first identity data and the second identity data together identify stored information defining the relative position.

9. A region according to claim 3, wherein the surface is defined by a substrate.

10. A region according to claim 9, wherein the substrate is laminar.

11. A region according to claim 3, wherein the tags are disposed at predetermined positions on the surface.

12. A region according to claim 11, wherein the tags are disposed on the surface within a tessellated pattern comprising a plurality of tiles, each of the tiles containing a plurality of the tags.

13. A region according to claim 12, wherein the tiles interlock with each other to substantially cover the surface.

14. A region according to claim 13, wherein the tiles are all of a similar shape.

15. A region according to claim 14, wherein the tiles are triangular, square, rectangular or hexagonal.

16. A region according to claim 12, wherein the tags are disposed stochastically within each of the tiles.

17. A region according to claim 16, wherein the first identity data of each of the tags includes index data indicating the tile within which the tag is disposed and position data indicating the tag's position within that tile.

18. A region according to claim 3, wherein each of the tags includes at least one common feature in addition to the second identity data.

19. A region according to claim 18, wherein the at least one common feature is configured to assist finding and/or recognition of the tags by associated tag reading apparatus.

20. A region according to claim 18, wherein the at least one common feature is represented in a data format incorporating redundancy of information.

21. A region according to claim 20, wherein the at least one common feature is rotationally symmetric so as to be rotationally invariant.

22. A region according to claim 20, wherein the at least one common feature is ring-shaped.

23. A region according to claim 3, wherein each of the tags includes at least one orientation feature for enabling a rotational orientation of the tag being read to be ascertained.

24. A region according to claim 23, wherein the at least one orientation feature is represented in a format incorporating redundancy of information.

25. A region according to claim 24, wherein the at least one orientation feature is

rotationally asymmetric.

26. A region according to claim 24, wherein the at least one orientation feature is skewed along its major axis.

27. A region according to claim 3, wherein each of the tags includes at least one perspective feature for enabling a perspective distortion of the tag being read to be ascertained.

28. A region according to claim 27, wherein the at least one perspective feature includes at least four sub-features which are not coincident.

29. A region according to claim 3, wherein each tag includes a plurality of tag elements, the first and second identity data each being defined by a plurality of the elements.

30. A region according to claim 29, wherein the tag elements are disposed in one or more arcuate bands around a central region of each tag.

31. A region according to claim 30, wherein there are a plurality of the arcuate bands disposed concentrically with respect to each other.

32. A region according to claim 31, wherein each element takes the form of a dot having a plurality of possible values.

33. A region according to claim 32, wherein the number of possible values is two.

34. A region according to claim 32, wherein when representing one of the possible values, the tag elements absorb, reflect or fluoresce electromagnetic radiation of a predetermined wavelength or range of wavelengths to a predetermined greater or lesser extent than the surface.

35. A region according to claim 32, wherein the possible values of the tag elements are defined by different relative absorption, reflection or fluorescence of electromagnetic radiation of a predetermined wavelength or range of wavelengths.

36. A region according to claim 32, wherein the tags are not substantially visible to an average unaided human eye under daylight or ambient lighting conditions.

37. A region according to claim 32, wherein the tags are slightly visible to an average unaided human eye under daylight or ambient lighting conditions.

38. A region according to claim 32, wherein the tags are visible to an average unaided human eye under daylight or ambient lighting conditions.

39. A region according to claim 3, wherein the first identity data is represented in a format incorporating redundancy of information.

40. A region according to claim 3, wherein the second identity data is represented in a format incorporating redundancy of information.

41. A region according to claim 2, wherein the tags are printed onto the surface by means of a printer.

42. A region according to claim 41, wherein the printer is an ink printer.

43. A region according to claim 42, wherein the tags are printed using ink that is absorbent or reflective in the ultraviolet spectrum or the infrared spectrum.

44. A region according to claim 41, wherein the printer also prints additional information onto the surface.

45. A region according to claim 44, wherein the additional information is printed onto the surface using colored or monochrome inks.

46. A region according to claim 45, wherein the additional information is printed onto the surface using one of the following combinations of colored inks:

CMY;

CMYK;

CMYRGB; and

spot colour.

47. A region according to claim 2, wherein at least a plurality of the tags are disposed stochastically upon the surface.

48. A region according to claim 47, wherein the first identity data of each of the tags includes position data indicating the tag's position in relation to either the surface or a plurality of the other tags.

49. A region according to claim 48, wherein the tags are disposed in a regular array on the surface.

50. A region according to claim 49, wherein the array is triangular.

51. A region according to claim 50, wherein the tags are tiled over the surface

52. A region according to claim 49, wherein the array is rectangular.

53. A region according to claim 52, wherein the tags are tiled over the surface.

54. A region according to claim 2, further including additional non-tag information disposed on the surface

55. A region according to claim 1, wherein the region is identified with sufficient precision to distinguish the region from 1.5×10^{14} other regions.

56. A region according to claim 1, wherein any 10 millimetre diameter subregion of the region includes sufficient coded data to identify the region.

57. A region according to claim 56, wherein any 10 millimetre diameter subregion of the region includes sufficient information to identify at least one point of the region.

58. A surface, including a region according to any one of the preceding claims.

59. A method of producing a surface having a region, the method including the steps of:

(a) defining coded data, the coded data being indicative of:

a region identity associated with the region; and

a plurality of points within the region;

(b) disposing the coded data within a region on the surface

60. A method according to claim 59, wherein the coded data includes at least one tag, each tag being indicative of the region identity and the position of the tag within the region.

61. A method according to claim 60, wherein each of the tags includes:

first identity data defining a relative position of that tag; and

second identity data identifying the surface.

62. A method according to claim 61, wherein the respective first identity data associated with each tag defines the position of that tag with respect to the surface.

63. A method according to claim 61, wherein the respective first identity data associated with each tag defines a position of that tag with respect to one or more other tags.

64. A method according to claim 59, including the step of providing a substrate upon which the surface is defined, the step being performed at any suitable time in relation to the other steps of the method.

65. A method according to claim 60, wherein step (b) includes the sub-step (b)(i) of disposing the tags at predetermined positions on the surface.

66. A method according to claim 65, wherein sub-step (b)(i) includes the step of disposing the tags in a regular array on the surface.

67. A method according to claim 65, wherein sub-step (b)(i) includes the step of disposing the tags in a rectangular array on the surface.

68. A method according to claim 66, wherein the step of disposing the tags on the surface includes the sub-step of tiling the tags over the surface.

69. A method according to claim 60, further including the step of adding a common feature to the tags in addition to the second identity data.

70. A method according to claim 69, wherein the common feature is configured to assist location and/or recognition of the tags by associated tag reading apparatus.

71. A method according to claim 69, wherein the common features are represented in a format incorporating redundancy of information.

72. A method according to claim 60, further including the step of providing each of the tags with one or more orientation features for enabling an orientation of the tag being read to be ascertained.

73. A method according to claim 72, wherein the orientation features are represented in a format incorporating redundancy of information.

74. A method according to claim 73, wherein each tag includes a plurality of tag elements, the first and second identity data being defined by a plurality of the elements.

75. A method according to claim 74, wherein the tag elements are disposed in one

or more arcuate bands around a central region of each tag.

76. A method according to claim 75, wherein there are a plurality of the arcuate bands disposed concentrically with respect to each other.

77. A method according to claim 76, wherein each element takes the form of a dot having a plurality of possible values.

78. A method according to claim 77, wherein the number of possible values is two.

79. A method according to claim 77, wherein when representing one of the possible values, the tag elements absorb, reflect or fluoresce electromagnetic radiation of a predetermined wavelength or range of wavelengths to a predetermined greater or lesser extent than the surface.

80. A method according to claim 77, wherein the possible values of the tag elements are defined by different relative absorption, reflection or fluorescence of electromagnetic radiation of a predetermined wavelength or range of wavelengths.

81. A method according to claim 77, wherein the tags are not substantially visible to an average unaided human eye under daylight or ambient lighting conditions.

82. A method according to claim 77, wherein the tags are slightly visible to an average unaided human eye under daylight or ambient lighting conditions.

83. A method according to claim 77, wherein the tags are visible to an average unaided human eye under daylight or ambient lighting conditions.

84. A method according to claim 61, wherein the first identity data is represented in a format incorporating redundancy of information.

85. A method according to claim 61, wherein the second identity data is represented in a format incorporating redundancy of information.

86. A method according to claim 60, wherein the tags are printed onto the surface by means of a printer.

87. A method according to claim 86, wherein the printer is an ink printer.

88. A method according to claim 87, wherein the tags are printed using ink that is absorbent or reflective in the ultraviolet spectrum or the infrared spectrum.

89. A method according to claim 86, wherein the printer also prints additional information onto the surface.

90. A method according to claim 89, wherein the additional information is printed onto the surface using colored or monochrome inks.

91. A method according to claim 90, wherein the additional information is printed onto the surface using one of the following combinations of colored inks:

CMY;

CMYK;

CMYRGB; and

spot colour.

92. A method according to claim 60, wherein at least a plurality of the tags are disposed stochastically upon the surface.

93. A method according to claim 92, wherein the first identity data of each of the tags includes position data indicating the tag's position in relation to either the surface or a plurality of the other tags.

94. A method according to claim 93, wherein the tags are disposed in a regular array on the surface.

95. A method according to claim 94, wherein the array is triangular.

96. A method according to claim 95, wherein the tags are tiled over the surface

97. A method according to claim 94, wherein the array is rectangular.

98. A method according to claim 97, wherein the tags are tiled over the surface.

99. A method according to claim 60, further including additional non-tag information disposed on the surface

100. A method according to claim 59, wherein the region is identified with sufficient precision to distinguish the region from 1.5×10^{14} other regions.

101. A method according to claim 59, wherein any 10 millimetre diameter subregion of the region includes sufficient coded data to identify the region.

102. A method according to claim 101, wherein any 10 millimetre diameter subregion of the region includes sufficient information to identify at least one point of the region.

103. A method according to claim 63, wherein step (b) includes the sub-step of disposing the readable tags on the surface such that the relative spacing of their centres is less than about 12mm.

104. A method according to claim 103, wherein the relative spacing is less than about 3mm.

105. A method according to claim 103, wherein the relative spacing is less than about 1mm.

106. A region according to any one of claims 1 to 3, 7, 8, 18, 24 or 29 to 35, wherein the coded data is machine readable, and the information represented by the coded data is substantially inscrutable to an unaided human.

107. A method according to any one of claims 59 to 61, 69, 72 or 74 to 80, wherein the coded data is machine readable, and the information represented by the coded data is substantially inscrutable to an unaided human.